

Serial No. 10/020,871
Reply to Office Action of July 3, 2006

Docket No. HI-0051

Amendments to the Drawings:

The attached drawings include changes to Figs. 1-3. These sheets, which includes Fig. 1-3, replaces the original sheets including Fig. 1-3. In Fig. 1, previously omitted element 100 has been added. In Fig. 3, previously omitted element 300 has been added.

Attachment: Replacement Sheets
Annotated Sheets Showing Changes

REMARKS/ARGUMENTS

Claims 1-3 and 5-14 are pending in this application. By this Amendment, claims 4 and 15 are canceled without prejudice or disclaimer, the specification, Figs. 1 and 3 and claims 1, 5 and 9 are amended. Reconsideration in view of the above amendments or the following remarks is respectfully requested.

A. The Office Action objects to Figs. 1 and 3. In Fig. 1, previously omitted element 100 has been added. In Fig. 3, previously omitted element 300 has been added. Attached are Annotated Sheets and Replacement Sheets for Figs. 1 and 3. Applicant respectfully submits the above amendments obviate the grounds for the objection. Withdrawal of the objection to the drawings is respectfully requested.

B. The Office Action objects to the disclosure for informalities. Attached is a Substitute Specification that numbers the paragraphs with at least four numerals (e.g., [0001]). No other changes have been made to the specification and no new matter has been added. Applicant respectfully submits the above amendments obviate the grounds for the objection. Withdrawal of the objection to the disclosure is respectfully requested.

C. The Office Action rejects claims 1-15 under 35 U.S.C. §103(1) over U.S. Patent No. 6,480,529 to Sih and U.S. Patent No. 6,724,807 B1 to Krasner et al. (hereafter

"Krasner"). Since the references, individually or in combination, do not disclose or suggest features recited in the pending claims, the rejection is respectfully traversed.

The Patent Office bears the initial burden of proving a *prima facie* conclusion of obviousness. MPEP §2142. The required elements of proof are: 1) a suggestion or motivation to modify or combine references, 2) a reasonable expectation of success, and 3) the references must teach or suggest all the claim limitations. MPEP §2143.

With respect to claim 1, Applicants respectfully submit that Sih and Krasner fail to teach or suggest claimed features as required under §103. The Office Action admits Sih fails to disclose first despreaders means for despreaders a first input signal, and second despreaders means for despreaders a second input signal. The Office Action asserts that Krasner discloses first despreaders means for despreaders a first input signal, and a second despreaders means for despreaders a second input signal. See, for example, page 8, lines 1-5 and 5-11, respectively, of the Office Action. In contrast, Applicant respectfully submits Krasner merely discloses a single despreaders means, which includes a plurality of despreaders for despreaders GPS input signals. See Figures 2A-2B and column 5, lines 42-60 of Krasner.

Claim 1 recites a first shift register bank that sequentially stores PN codes, a second shift register bank that sequentially stores input signals, wherein the input signals of a

even path are sampled in a first half PN chip and the input signals of a odd path are sampled in a following half PN chip. Claim 1 further recites first despreading means for despreading the input signals of the even path using the PN codes inputted from the first shift register bank, and second despreading means for despreading the input signals of the odd path using the PN codes inputted from the first shift register bank. Claim 1 recites two separate despreading means. The first despreading means of one embodiment despreads even-path signals using a PN code, and the PN code is based on 1 chip spacing. Moreover, second despreading means of one embodiment despreads odd-path signals using the PN code that the first despreading means uses. In one embodiment this feature of the two despreading means enables high-resolution multipath searching. See at least Figure 4 of the application.

Applicant respectfully submits Krasner fails to disclose two separate input signals and two separate despreading means dedicated to corresponding input signals. Further, Krasner merely discloses 1/2 chip spacing, but the 1/2 chip spacing is applied to the PN code, not GPS input signals (recited "A typical initial acquisition strategy involves searching the PN code over each of the 1023 symbols in 1/2 chip interval," column 1, lines 35-42, and see FIG 2A, element 14 Shift register Length = 1023). Therefore,

Applicant respectfully submits that Krasner fails to disclose even-path signals, odd-path signals and two separate despreading means and combinations thereof as recited in claim 1.

Applicant respectfully submits that Krasner fails to teach or suggest any modification to its disclosure that would result in at least features of an apparatus for searching a pilot signal including even-path signals, odd-path signals and two separate despreading means and combinations thereof as recited in claim 1. Thus, Sih and Krasner, individually or in combination, would not result in features of an apparatus including first and second shift register banks and first and second despreading means and combinations thereof recited in claim 1.

For at least the reasons set forth above, Applicants respectfully submit that claim 1 defines patentable subject matter. Claim 9 defines patentable subject matter for at least reasons similar to claim 1. Dependent claims 2-3, 5-8 and 10-14 are allowable for at least the reasons discussed above with respect to independent claims 1 and 9, from which they depend, as well as for their added features. Claims 4 and 15 are canceled without prejudice or disclaimer. Withdrawal of the rejection of claims 1-15 under 35 U.S.C. §103 is respectfully requested.

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CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Carl R. Wesolowski**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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ANNOTATED SHEET SHOWING CHANGES

FIG. 1

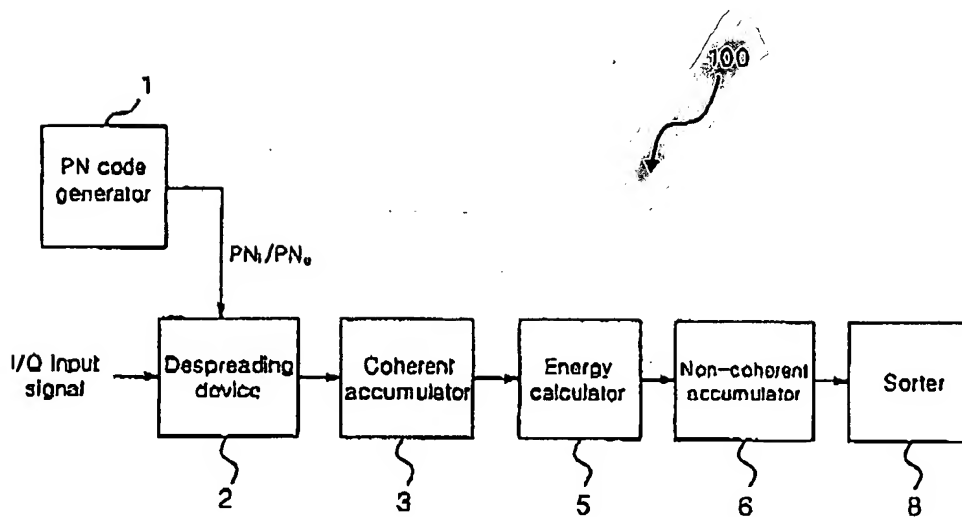
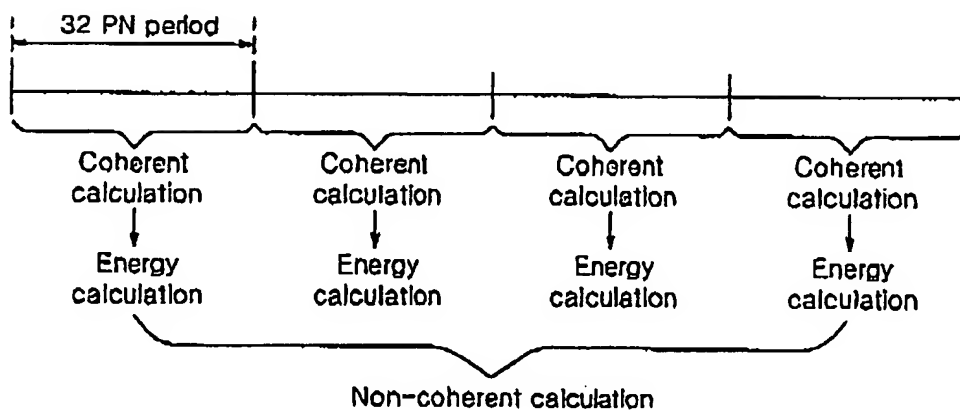


FIG. 2





ANNOTATED SHEET SHOWING CHANGES

FIG. 3

